

**Remarks**

1) Summary of Prosecution to Date

This case was filed on December 29, 2002 with claims 1 – 29.

A requirement for restriction was made on March 22, 2002. A reply to that requirement was made on April 22, 2002. In the reply of April 22, 2002, the applicant traversed the requirement for restriction, and made a provisional election of the claims related to Invention I. In the applicant's view those claims were claims 1 – 18 and 21 – 29. In the Examiner's view those claims were claims 1 – 18 and 27 – 29.

A first office action on the merits was mailed on October 22, 2002. In that office action, the Examiner indicated that he was not persuaded by the applicant's arguments with respect to the claim groupings, and made the election of species requirement "final" with the election of Group I of claims 1 – 18 and 27 – 29.

In addition to a number of formal matters, all of the claims were rejected under either 35 USC 102 or 35 USC 103. In particular:

- (a) Claims 1 – 4, 6, 8, 9, 12, 13, 17 and 18 were rejected under 35 USC 103 as being obvious given US Patent 4,633,055 of Conley in light of US Patent 4,103,595 of Corse.
- (b) Claim 5 was rejected under 35 USC 103 given Conley and Corse further in view of US Patent 6,222,155 of Blackmon et al.
- (c) Claim 7 was rejected under 35 USC 103 given Conley and Corse and further in view of US Patent 5,787,559 of Dean.
- (d) Claims 10 and 11 were rejected under 35 USC 103 given Conley and Corse, and further in view of US Patent 3,866,892 of Hooper.
- (e) Claims 27 – 29 were rejected under 35 USC 102 as being anticipated by US Patent 4,633,055 of Conley.

And, finally, claims 14 and 15 were found to be allowable if re-written in independent form.

2) Reconsideration of Restriction Requirement Again Requested

The applicant has noted the Examiner's commentary by way of reply to the applicant's arguments, but respectfully makes further traverse of them.

In the office action of March 22, 2002 the Examiner has indicated that Group II pertained to "a process for manufacture of railroad car side sheets, classified in class 219, subclass 121.41.

Clearly, it is beyond dispute that nowhere in any of claims 21 – 26 does the term "rail road car side sheets", or anything similar, appear. As such, the applicant respectfully submits that the grounds stated in the office action of March 22, 2002 based on the assertion cannot be supported in that regard. That is the basis upon which Group II was defined in the office action of March 22, 2001. The applicant submits that the requirement for restriction has now been made final on the basis of a different definition of Group II that was not provided in the previous office action. The applicant respectfully submits that the final rejection is not proper where, as here, the grounds have changed without the applicant having had a full and fair, non-final opportunity to contest the requirement.

Second, from the Examiner's reply commentary in the office action of October 22, 2002, it appears that the applicant may have misunderstood the meaning of the Examiner's previous commentary concerning the cutting of different types of metals. The Examiner's earlier comments appear to have been made not as a distinction from the term "metal" in claim 1 of Group I, but rather as a distinction from cutting steel as in claim 21. Nonetheless, the process of claims 21 – 26 would seem to relate well to the Examiner's classification of Group I as "an apparatus for cutting sheets of metal material, classified in class 219, subclass 121.39."

The applicant submits that claims 21 – 26 satisfy the description given by the Examiner for Group I, and that a substantive basis for a difference in classification has not been established. Therefore, the applicant submits that it has not been shown that the claims "have acquired separate status in the art as shown by their separate classification."

The applicant requests further reconsideration of the requirement for restriction in this case.

3) Re: Drawings

The Examiner has requested that the “first drive train” and “second drive train” recited in claims 17 and 18 respectively be shown on the drawings. In view of the amendments to claims 17 and 18, the applicant submits that no drawing amendment is now necessary.

4) Re: Abstract

The abstract has been amended at line 7 as suggested by the Examiner.

5) Re: Claim 17 and Claim 18

Claims 17 and 18 have been amended to delete the word “train”, leaving a “first drive” and a “second drive” respectively.

6) Re: By-pass

The Examiner has suggested that the hyphenated word “by-pass” in claim 1 be replaced by the word “bypasses”. The applicant respectfully submits that the term “by-pass” is correctly used in this instance.

In English it would be correct to write “... along which said carriage can pass said cutting head by.” However, in North America this elegant phrasing would tend not to be used. Instead, in North American English, the word “by-pass”, (or “bypass”), can be either a noun, or, as in this case, a verb. That the verb is correctly used is clear if one substitutes the words “is able to” for the word “can”, such that the resulting phrase is “... along which said carriage is able to by-pass said cutting head.”

In this case, in the present indicative, the second verb correctly takes the infinitive form, namely to “by-pass”. It would clearly be incorrect to say “... along which said carriage can bypasses said cutting head.” That is, the third person singular, present indicative, is not the correct form to follow the preceding verb “can”. Therefore, as the Examiner will no doubt now agree, the claim is properly drafted without the proposed amendment.

7) Rejections Under 35 U.S.C. 102 - Anticipation

(i) Test for Anticipation

Anticipation can only be established by a single prior art reference which discloses each and every element of the claimed invention. *Structural Rubber Products Co., v. Park Rubber Co.*, 749 F.2d 7070; 223 U.S.P.Q. 1264 (C.A.F.C. 1984). The test for anticipation requires that all of the claimed elements must be found in exactly the same situation and united in the same way to perform the same function in a single unit of the prior art. *Studiengesellschaft Kohle, m.b.H. v. Dart Industries., Inc.*, 762 F.2d 724, 726, 220 U.S.P.Q. 841 at 842 (C.A.F.C. 1984). Anticipation cannot be predicated on teachings in a reference that are vague or based on conjecture. *Datascope Corp. v. SMEC Inc.*, 594 F. Supp. 1036; 224 U.S.P.Q. 694, 698 (D.N.J. 1984).

8) **Claim Objections under 35 U.S.C. 103(a) – Obviousness - Law**

(a) **MPEP Section 2142: Basic Requirements of a *Prima Facie* Case of Obviousness**

Section 2142 of the Manual of Patent Examining Procedure (MPEP) states:

**ESTABLISHING A *PRIMA FACIE* CASE OF OBVIOUSNESS**

“To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art and not based on the applicant’s disclosure. *In re Vaeck*, 947 F. 2d 488, 20 USPQ2d 1438 (Fed. Cir 1991).

(b) **Mere Possibility of Combination is Not Sufficient**

Section 2143.01 of the Manual of Patent Examining Procedure (MPEP) states:

**FACT THAT REFERENCES CAN BE COMBINED OR MODIFIED IS NOT SUFFICIENT TO ESTABLISH *PRIMA FACIE* OBVIOUSNESS**

“The mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination. *In re Mills*, 916 F.2d 680, 16 USPQ2d 1430 (Fed. Cir. 1990)

(c) **Must Have Teaching, Suggestion, or Incentive to Combine**

Obviousness cannot be established by combining the teachings of the prior art to produce the claimed invention *absent some teaching, suggestion or incentive* supporting the combination *ACS Hospital Systems Inc. v. Montefiore Hospital*, 732 F. 2d 1572, 1577, 221 USPQ 929, 933 (Fed. Cir.). Cited in *In re Geiger*, 815 F.2d at 688, 2 USPQ 2d at 1268 (Fed. Cir. 1987) (Emphasis added). See also *In re Lee*, (61 USPQ 2d 1430 (CAFC, 2002)).

Obviousness cannot be established by combining references without also providing objective evidence of the motivating force that would impel one skilled in the art to do what the patent applicant has done (See *In Re Lee, infra* ; see also *Ex Parte Levengood*, 28 USPQ2d 1300, 1302 (Bd. Pat. App. & Inter. 1993)).

(d) Inquiry Must Present a Convincing Line of Reasoning

The initial burden is on the examiner to provide some suggestion of the desirability of doing what the inventor has done. “To support the conclusion that the claimed invention is directed toward obvious subject matter, either the references must expressly or impliedly, suggest the claimed invention or *the examiner must present a convincing line of reasoning* as to why the artisan would have found the claimed invention to have been obvious in light of the teachings of the references.” *Ex Parte Clapp*, 227 USPQ972, 973 (Bd. Pat. App. & Inter. 1985) (Emphasis added).

When the motivation to combine the teachings of the references is not immediately apparent, it is the duty of the examiner to explain why the combination of the teachings is proper. *Ex Parte Skinner*, 2 USPQ2d 1788 (Bd. Pat. App. & Inter. 1986). ”

(e) Inquiry Must Be Thorough And Searching

“The factual enquiry whether to combine the references must be thorough and searching. Id., It must be based on objective evidence of record. This precedent has been reinforced in myriad decisions, and cannot be dispensed with. . . .

“The need for specificity pervades this authority. See e.g.,

“*In re Kotzab* 217 F. 3d 1365, 1371, 55 USPQ 2d 1313, 1317 (Fed. Cir. 2000) (“particular findings must be made as to the reason the skilled artisan, with no knowledge of the claimed invention, would have selected these components for combination in the manner claimed.”);

*In re Rouffet*, 149 F.3d 1350, 1359, 47 USPQ 2d 1453, 1459 (Fed. Cir. 1998) (“even when the level of skill in the art is high, the Board must identify specifically

the principle, known to one of ordinary skill, that suggests the claimed combination. In other words, the Board must explain the reasons one of ordinary skill in the art would have been motivated to select the references and to combine them to render the claimed invention obvious.”);

*In re Fritch*, 972 F. 2d 1260, 1265, 23 USPQ 2d 1780, 1783 (Fed. Cir. 1992) (The examiner can satisfy the burden of showing obviousness of the combination “only by showing some objective teaching in the prior art or that knowledge generally available to one of ordinary skill in the art would lead that individual to combine the relevant teachings of the references”.”

(*In re Lee*, 61 USPQ 2d 1430 (CAFC, 2002). Emphasis and paragraph division added.)

Conclusory statements by an examiner do not adequately address the issue of motivation to combine. (*In re Lee, supra*).

(f) “Would have been obvious to one skilled in the art”

The MPEP requires that the examiner provide an objective source of support for a contention that a feature is known or obvious to one skilled in the art. An unsupported statement that a feature or combination “would have been obvious to one skilled in the art” is improper if made without support. *In re Lee, supra*, and *In re Garrett* 33 BNA PTCJ 43.

A statement that modifications of the prior art to meet the claimed invention would have been “well within the ordinary skill of the art at the time the claimed invention was made because references relied upon teach that all aspects of the claimed invention were individually known in the art” is not sufficient to establish a *prima facie* case of obviousness without some objective reason to combine the teachings of the references. *Ex parte Levengood*, 28 USPQ 2d 1300 (Bd. Pat. App. & Inter. 1993). See also *Al-site Corp. v. VSI Int'l Inc.*, 174 F.3d 1308, 50 USPQ 2d 1161 (Fed. Cir. 1999) (The level of skill in the art cannot be relied upon to provide suggestion to combine references).

9) Re: Claims 1 – 4, 6, 8 – 9, 12 – 13, and 17 – 18

Claims 1 – 4, 6, 8 – 9, 12 – 13, and 17 – 18 stand rejected under 35 USC 103 as being obvious given US Patent 4,633,055 of Conley in light of US Patent 4,103,595 of Corse.

The applicant respectfully traverses this rejection, and any other rejection premised upon the combination of the Corse reference with the Conley reference.

First, the Examiner asserts that “Corse discloses a cutting machine comprising a pathway including a portion along which said carriage bypasses said cutting head (col. 4, lines 56 – 62).”

The applicant respectfully submits that Corse col. 4, lines 56 – 62 disclose no such thing. Corse shows and describes a machine into which a continuous web band is fed and processed. Corse does not show, describe, or suggest anything like a “carriage” for carrying a workpiece. Corse does not show, describe or suggest anything like a pathway for a carriage. Corse does not show, describe, or suggest a carriage pathway having a by-pass to permit the carriage (which, as noted, Corse doesn’t have) to by-pass the cutting head.

On the contrary, Corse shows a machine that uses a series of rollers to pass a continually moving workpiece in the nature of a web band through a cutting machine. The rollers permit the web to be directed in alternate directions. There is no mention of a “carriage” or “carriage pathway” anywhere in the document.

Second, to establish *prima facie* obviousness under 35 USC 103 the Examiner is required to demonstrate on the basis of objective evidence of record in this case (a) suggestion, motivation or incentive to combine or modify the references as proposed; and (b) that, when combined, the references will yield the claimed invention. (See *In re Lee*, above)

The applicant respectfully submits that there is nothing in the office action of October 22, 2002 that in any way identifies any objective basis in the evidence of record in this case to support the proposition that these references be combined in any manner, let alone that points to their combination in such a way as to yield the presently claimed invention.

Thirdly, even if the references were combined as proposed, there would still not be a pathway along which a transfer carriage can be moved, in which the pathway has a portion that permits the carriage to by-pass the cutting head.

For these three reasons, if no others, the applicant respectfully submits that no *prima facie* case of obviousness has been established on which to base a rejection under 35 USC 103 of any of claims 1 – 4, 6, 8 – 9, 12 – 13, 17 – 18, or any claim dependent from any of them. The applicant respectfully submits that each and every one of these claims is allowable over the prior art of record, and requests early and favourable disposition of this matter.

With respect to remaining dependent claims 5, 7, 10 – 11, and 14 – 16, the applicant again respectfully submits that no suggestion, motivation, or incentive to combine or modify the various references has been identified by the Examiner in objective art of record in this case. As such, the applicant respectfully submits that *prima facie* obviousness has not been established with respect to any of these claims. The applicant respectfully submits that for this additional reason, these further dependencies are presently allowable.

10) Re: Claims 27 - 29

Claims 27 – 29 were rejected under 35 USC 102 as being anticipated by Conley. The applicant notes that claims 27, as amended, indicates that the apparatus includes a path defining a circuit about which the movable bed can travel. Conley has no such feature. The applicant therefore respectfully submits that claim 27, as amended, and any claims dependent therefrom, namely claims 28 and 29, are not anticipated by Conley.

The applicant has amended claim 29 to depend from claim 28, such that the plural “movable beds” is consistent with the antecedent.

11) Conclusion

In view of the foregoing arguments the applicant respectfully submits that all of claims 1 – 29 are in a condition to permit allowance. Therefore the applicant requests early and favourable disposition of this application.

Respectfully submitted,

  
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**Version of Amended Claims With Markings to Show Changes Made**

12. (Amended) The apparatus of claim 8 wherein:

[said carriage is a first carriage, and] said apparatus includes at least a second transfer carriage; and  
said first transfer carriage is movable to said loading position while said second transfer carriage is in said cutting position.

13. (Amended) The apparatus of claim 8, wherein:

[said carriage is a first carriage;]  
said apparatus includes at least a second transfer carriage; and  
said path includes an unloading position clear of said cutting position.

14. (Amended) The apparatus of claim 13 wherein said first transfer carriage is movable to said unloading position while said second transfer carriage is in said cutting position.

16. (Amended) The apparatus of claim 13 wherein said first transfer carriage is movable between said unloading and loading positions while said [first] second transfer carriage is in said cutting position.

17. (Amended) The apparatus of claim 1 wherein said apparatus includes a first drive [train] operable to move said carriage along a first axis relative to said cutting head in said cutting position.

18. (Amended) The apparatus of claim 17 wherein said apparatus includes a second drive [train] operable to return said carriage to said loading position.

27. (Amended) A plasma arc cutting apparatus including:

a plasma arc cutting head [,];  
a movable bed for supporting a planar workpiece;  
a path defining a circuit about which said movable bed can move;  
said movable bed being movable to a cutting position in which said cutting head is operable to cut the workpiece;  
said head being mounted to move in two directions relative to the movable bed to [permits] permit said cutting head to cut profiles in a [stationary] planar workpiece carried on said bed; and

[a movable bed for supporting a planar workpiece;]

[the movable bed being movable to a cutting position in which said cutting head is  
operable to cut the work piece; and]

the movable bed being operable to transport the workpiece away from the cutting head  
when cutting of the workpiece has ceased.

29. (Amended) The apparatus of claim [27] 28 wherein said movable beds are constrained to move [in a] along said circuit between said cutting position and a loading position.

Marked-Up Abstract  
Metal Cutting Process

Abstract of the Disclosure

A metal cutting process employs an apparatus including a cutting machine operable to cut two dimensional profiles in plates. The plates are transported to and from the cutting machine on carriages. The carriages are movable between a cutting, or burn position , an un-loading position, and a loading, or re-loading position along a path. The path forms a closed circuit, or loop. In the burn position the cutting machine is operable to cut profiles in the plates. Cutting on one carriage can occur while another carriage, or other carriages, are being loaded or unloaded, or both. The carriages can be [cycled] cycled along the path repeatedly. The apparatus can include a de-coiling machine for un-coiling coils of steel sheet, and the process can include uncoiling a steel sheet directly onto one of the carriages. The process can also include cutting a steel sheet in a single piece to form the side of a large structure, such as a rail road car.